

Progress Report

Office of International Health Programs (EH-63), Department of Energy

Title of Project: "RADIATION RISK ASSESSMENT OF CATARACT DEVELOPMENT IN A DOSE-DEFINED COHORT OF WORKERS INVOLVED IN THE CHERNOBYL ACCIDENT"

Short report covering the forth funding period

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Period covered by this report: April 1, 1999 – September 31, 1999

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I. Summary of Work

The Funding Arrangement between the Department of Energy of the United States of America and the Institute of Occupational Health, Academy of Medical Sciences of Ukraine for support of the U.S.-Ukraine Cataract Study was signed in August 1997. The duration of the entire project period extends from 10.01.97 to 12.31.01. The General Goal of this four-year investigation is to facilitate the study a 12,000 subject cohort of the Liquidator population.

II. Milestones and Deliverables Accomplished during the Reporting Period

Milestones were included in the Annual Work Proposal. All the milestones were fulfilled during the reporting period. Short summaries of the results are presented in the following sub-sections.

A.

The goals of the work outlined in this years proposal (04.01.99 - 09.31.99) are to:

- 1) Continue the data acquisition and eye examinations of the 3000 subjects (Liquidators).
- 2) Input the data from the epidemiological questionnaires as they are generated.
- 3) Analyze the acquired data for completeness and compliance.
- 4) Continue transport of the data into the epidemiological database.
- 5) Continually monitor program progress at the 9 active sites.
- 6) Participate list of Liquidator recruits for the third year re-examination

7) Program assessment

B.

Table 1. Summary of the cohort study during the period from April 1, 1999 to September 31, 1999.

Region	Total database received from the NCRM from April 1, 1999 to September 31, 1999	Examined at the sites and in the Institute from April 1, 1999 to September 31, 1999
Kharkiv	4957* + 126	918
Poltava	4860* + 197	1098
Zaporizja	193* + 53	72
Donetsk	5457* + 306	1089
Dnipropetrovsk	82*	602
Kiev	-	91
Atomic workers	-	18
Total	15549* + 844 = 16393	3888

* these Liquidators were included without mail response.

Table 2. Summary of the cohort study during the period from October 1, 1998 to September 31, 1999

Region	Examined at the sites and in the Institute from October 1, 1998 to March 31, 1999	Examined at the sites and in the Institute from April 1, 1999 to September 31, 1999	Examined at the sites and in the Institute from October 1, 1998 to September 31, 1999
Kharkiv	207	918	1125
Poltava	81	1098	1179
Zaporizja	34	72	106
Donetsk	27	1089	1116
Dnipropetrovsk	1384	602	1986
Kiev	316	91	407
Atomic workers	372	18	390
Total	2421	3888	6309

Table 3. Summary of the cohort study during the period from October 1, 1997 to September 31, 1999

Region	Examined at the sites and in the Institute from October 1, 1997 to September 31, 1998	Examined at the sites and in the Institute from October 1, 1998 to September 31, 1999	Examined at the sites and in the Institute from October 1, 1997 to September 31, 1999
Kharkiv	180	1125	1305
Poltava	189	1179	1368
Zaporizja	-	106	106
Donetsk	397	1116	1513
Dnipropetrovsk	2145	1986	4131
Kiev	1289	407	1696
Atomic workers	1200	390	1590
Total	5400	6309	11709

Examined subjects in the Institute and at the sites from October 1, 1997 to September 31, 1999 totalled 11709. This is 97.7% of the planned cohort of 12,000.

III. Other relevant information

The principal US investigator, B.V. Worgul, traveled to Kiev during the period 04/01/99 - 31/09/99. The purposes of the trips were to meet with the primary team, discuss logistics for accelerating procedures to allow us to get back on schedule and to plan the addition of other sites in the program.

We included in the cohort those Liquidators who were among of the potential candidates from the State Chernobyl Registry (SCR) of Ukraine with preliminary estimated doses but who failed to respond to the initial mailings. The advantages of approaching those individuals are a reduction in the biased "enrichment" of the cohort while at the same time increasing the recruitment rate.

During the reporting period, the Ophthalmologists-Investigators were brought to the Institute and the members of the project team visited the sites.

When we submitted our present funding proposal we were under the impression that the case control study planned begin this year was eliminated. Prof. B. Worgul has since informed us that it will in fact begin. Although we did not budget for it this year, we have initiated the study. Dr. Vitte visited NYC for the express purpose of solidifying the planned logistics and the define the needs to begin the case control study. He used money for this

purpose from the other sources but not from the DOE Project.

There were no obstacles or unexpected costs in our portion of the project.

The goals of the work outlined in this 6th month future proposal (10.01.99 - 03.31.00) are to:

- 1) Continue the data acquisition and second round follow-up of the first 3,000 subjects with the immediate aim of starting the nested Case-control study and a long-term follow-up epidemiology screening with investigation of the dose related ocular effects. .
- 2) Input the data from the epidemiological questionnaires as they are generated.
- 3) Analyze the acquired data for completeness and compliance.
- 4) Input the data from the case-control questionnaires as they are generated.
- 5) Analyze the acquired case-control data for completeness and compliance.
- 6) Continue transport of the data into the epidemiological database.
- 7) Continually monitor program progress at the 9 active sites.
- 8) Program assessment .

IV. Publications and Preprints

Worgul, B., Vitte, P., Junk, A., Kundiev, Y., Sergienko, N., Parkhomenko, G., Chumak, V., Ruban, A., Musiyachenko, N. and Shore, R.

"A new approach for radiation risk assessment for cataract development in a dose-defined cohort of workers involved in the Chernobyl accident - preliminary data" , (In preparation for Journal)

Signatures:

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